

Children's Environmental Health



Birth Defects

16. Industrial Releases of Mercury to the Air



A potent neurotoxin, mercury has been proven to cause severe brain damage in infants when their mothers were exposed to it during pregnancy. In January 2004, the U.S. Environmental Protection Agency released research indicating that 630,000 U.S. newborns had unsafe levels of mercury in their blood in 1999-2000, doubling previous estimates.¹ This new estimate equates to at least one in eight American women of childbearing age with mercury levels in her blood above what is considered safe for a developing fetus.

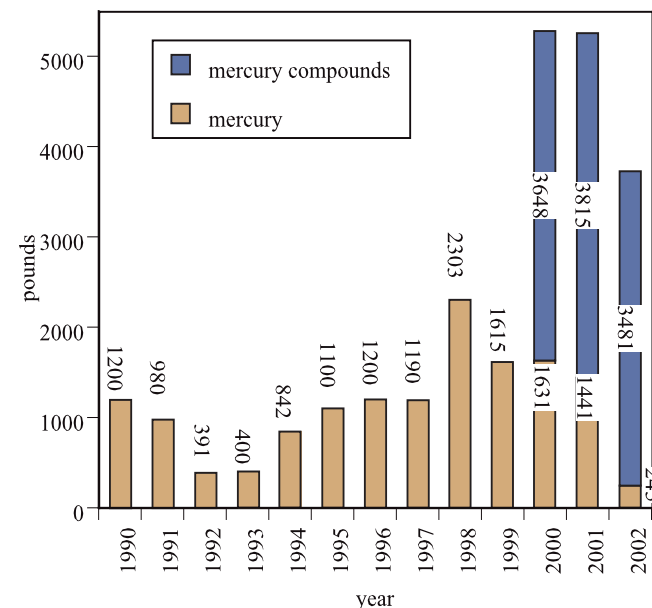
Mercury is a highly toxic element that is found both naturally and as a man-made environmental contaminant. Primary sources of mercury pollution include coal-burning power plants, the burning of hazardous and medical waste and production of chlorine. It also occurs naturally in the environment.

In 2002, Kentucky ranked 8th in the nation in the industrial release of mercury and mercury compounds. That year, 3,726 pounds of mercury were released to the air by 29 industrial facilities. Eighteen coal-fired power plants released 3,540 pounds of mercury to the air, or 95 percent of all mercury emissions in Kentucky that year, according to the Toxics Release Inventory. Power plants are the largest remaining unregulated source of mercury emissions.² The regulation of mercury from power plants has been the subject of much national debate. The EPA is required to promulgate nationwide mercury emissions standards for electricity generating utility boilers by December 2004.

Total mercury and mercury compound emissions in the U.S. have fallen substantially since 1990.³ In Kentucky mercury air emissions dropped significantly in 2002 after Westlake Vinyl, a major emitter of mercury in Kentucky made capital expenditures of \$38.6 million related to operational improvements, maintenance capital, safety and environmental projects and the completion of the conversion of its Calvert City chlorine plant from mercury cell to membrane technology.⁴

Mercury is also found in several products used in the home, schools and businesses. These may include some paints, thermometers, thermostats, batteries, fluorescent lamps, disinfectants, antiseptics, diuretics and preservatives. These items can release mercury into the environment when broken, mishandled or disposed. The EPA found in its *Mercury Study Report to Congress* that fever thermometers contribute 17 tons of mercury to solid waste every year. The EPA has responded to 3 mercury spill incidents at Kentucky schools during 2004, and has spent nearly a hundred thousand dollars cleaning up these spills at school facilities, school buses and residences where mercury has been tracked home by students and faculty/staff.⁵ A number of states have worked to eliminate mercury in the school environment. For example, Michigan passed a law to phase out liquid (free flowing) elemental mercury, as well as, mercury-containing instruments such as thermometers, barometers, manometers, and sphygmomanometers (blood pressure gauges) in its schools by 2004. Eight states and fifteen municipalities have also enacted mercury thermometer bans, and eleven national retail chains have pledged only to sell mercury free thermometers.⁶ In 1998, the American Hospital Association signed an agreement with the EPA promising to jointly find ways to encourage hospitals to voluntarily eliminate mercury and reduce overall waste.⁷

Indicator 16. Industrial Releases of Mercury to the Air in Kentucky^{endnote}



CD - Table 13. **Mercury releases and sources by county.**

